

REMARKS

Applicants respectfully request reconsideration of the present application.

1. Disposition of the Claims and Specification

Claims 1, 2 and 17-18 are pending. Claims 11, 20, 23, 26-27, 30-32 and 34-45 are withdrawn from consideration. Claims 3-10, 12-16, 19, 21-22, 28-29, 33 and 46-55 are canceled. Claim 1 is amended. Support for the amendment to claim 1 may be found in the specification, for example, at page 15, lines 2-3 and in SEQ ID NO: 1.

Because the foregoing amendments do not introduce new matter, entry thereof by the Examiner is respectfully requested.

2. Specification

Applicants have amended page 1 of the specification to reflect the status of the parent application, which issued as U.S. Patent No. 6,323,328, on November 27, 2001.

3. Claim Rejections – 35 U.S.C. § 112 – written description

Claims 1, 2 and 17-18 are rejected under 35 U.S.C. § 112, first paragraph. The examiner reasons that because the specification only sets forth SEQ ID NO: 1, the written description is not commensurate in scope with claims drawn to naturally occurring polypeptides comprising an amino acid sequence at least 90% identical to SEQ ID NO: 1 and biologically active and immunogenic fragments of SEQ ID NO: 1. Applicants respectfully request reconsideration and withdrawal of the rejection.

First, the examiner notes that “an amino acid sequence” of SEQ ID NO: 1 could be a polypeptide with as few as 2 contiguous amino acids of SEQ ID NO: 1. Similarly, the examiner states that “an amino acid sequence at least 90% identical to an amino acid sequence of SEQ ID NO: 1” could be a polypeptide 10 amino acids in length, 9 of which are from SEQ ID NO: 1. The examiner also reasons that the specification fails to provide definitive structural features of the claimed polypeptides. The examiner also states that there is no description of the conserved regions critical to the structure and function of the polypeptides.

Applicants respectfully disagree with the examiner. However, to expedite prosecution, Applicants have amended claim 1 to clarify that the claimed polypeptides comprise the full length amino acid sequence of SEQ ID NO: 1, or are 95% identical to the full length amino acid sequence of SEQ ID NO: 1. Support for the amendment to claim 1 may be found in the specification, for example, at page 15, lines 2-3 and in SEQ ID NO: 1.

Further, and in response to the examiner's argument regarding an alleged lack of "definitive structural features", Applicants note that page 14, lines 15-19 of the instant specification discloses such structural features. Specifically, the specification describes "potential casein kinase II phosphorylation sites at S83, S97, T153, S232, and S263" of the protein represented by SEQ ID NO: 1. The specification goes on to describe "potential protein kinase C phosphorylation sites at T50 and S338 and potential tyrosine kinase phosphorylation sites as K193 and R351" as well as a "potential citrate synthase signature sequence at G344." See page 14, lines 15-19.

4. Claim Rejections – 35 U.S.C. § 112 - enablement

Claims 1, 2 and 17-18 are rejected under 35 U.S.C. § 112, first paragraph because the specification does not enable a skilled person to use the invention commensurate in scope with the claims. First, the examiner reasons that the "biologically active fragments" and "immunogenic fragments" are not limited to SEQ ID NO: 1, because there is no requirement that the fragments consist of a sequence found in SEQ ID NO: 1.

Second, the examiner repeats the assertion made in section 3 above that the specification does not provide definitive structural features and conserved regions for the claimed polypeptides, and thus, provides insufficient guidance to one skilled in the art to allow such person to make and use the claimed polypeptides.

Applicants respectfully disagree with the examiner regarding the claimed fragments. However, to expedite prosecution, Applicants have amended claim 1. The present version of the claim avoids this issue. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection.

Further, applicants again refer to page 14, lines 15-19 of the instant specification, which describes definitive “structural features” of SEQ ID NO: 1. Applicants assert that one of skill in the art would know, by following the teachings of the specification, to not modify these regions of SEQ ID NO: 1, which should be conserved among the claimed polypeptides. Applicants respectfully request reconsideration and withdrawal of the rejection.

5. Claim Rejections – 35 U.S.C. § 102

Claims 1, 2 and 17-18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Evans *et al.* The examiner states that Evans *et al.* teach a polypeptide with 92.2% identity to the entire molecule of SEQ ID NO: 1. Therefore, the polypeptide of Evans *et al.* comprises an amino acid sequence of SEQ ID NO: 1, as well as biologically active and immunogenic fragments.

Applicants respectfully disagree with the examiner. To expedite prosecution, however, Applicants have amended claim 1(b) to recite “an amino acid sequence at least 95% identical to the full length amino acid sequence depicted in SEQ ID NO:1” and have deleted parts 1(c) and 1(d) referring to biologically active and immunogenic fragments. Support for the amendment to claim 1 may be found in the specification, for example at page 15, lines 2-3 and in SEQ ID NO: 1. The present version of the claims avoids this issue. The rejection should be withdrawn.

6. Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to

Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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